B65/2

NEWARK PUBLIC LIBRARY

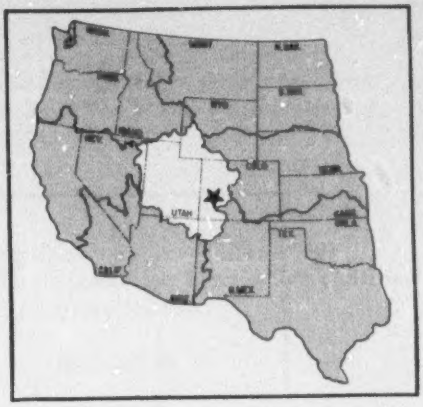
OCT 15 1982

U. S. GOVT. PUBS.
DEPOSITORY 376

Bostwick Park Project

Colorado: Montrose and Gunnison Counties

Upper Colorado Region
Bureau of Reclamation



The Bostwick Park Project is in west-central Colorado near the city of Montrose. The project develops flows of Cimarron Creek, a tributary of the Gunnison River, for irrigation and for benefits to sport fishing and recreation. A full and supplemental supply of irrigation water is available for 5,180 acres of land. Recreation opportunities and important fishery benefits are provided at Silver Jack Reservoir.

PLAN

Storage regulation is provided by Silver Jack Dam and Reservoir, constructed on Cimarron Creek. Project water is released from the reservoir to Cimarron Creek. The releases, along with usable natural flows, are diverted from the creek into the existing Cimarron Canal 2.5 miles below the dam, and conveyed 23 miles to the vicinity of the project lands. Some water is released from the canal and used on lands in the Cimarron area. Most of the water is conveyed to the canal terminus at Cerro Summit and then delivered to the Hairpin and Vernal Mesa Ditches. The project-constructed Bostwick Lateral diverts water from the Vernal Mesa Ditch and conveys it across Bostwick Park through an 18-inch siphon to lands above the West Vernal Mesa Lateral.

Silver Jack Dam and Reservoir

Silver Jack Dam and Reservoir

Silver Jack Dam is located on Cimarron Creek about 20 miles above the junction with the Gunnison River. The rolled-earthfill dam has a structural height of 173 feet. Its crest is 1,050 feet long and 30 feet wide. Total volume is 1,278,140 cubic yards of material. The outlet works to Cimarron Creek in the right abutment has a capacity of 280 cubic feet per second with the reservoir at the normal water surface elevation of 8926.0 feet and a capacity of 160 cubic feet per second at the minimum water surface elevation of 8840.0 feet. The spillway on the right abutment is an uncontrolled ogee section with a capacity of 6,220 cubic feet per second at maximum water surface elevation. The reservoir has a total capacity of 13,520 acre-feet, including 12,820 acre-feet of active capacity and 700 acre-feet of inactive capacity. When filled to its normal water surface elevation, the reservoir has a surface area of 293 acres.

Bostwick Lateral and Drains

The 3.6-mile Bostwick Lateral was constructed to deliver water to full service lands above the West Vernal Mesa Lateral. Repair, extension, and some new construction of about 7.2 miles of drains were completed by the water users.

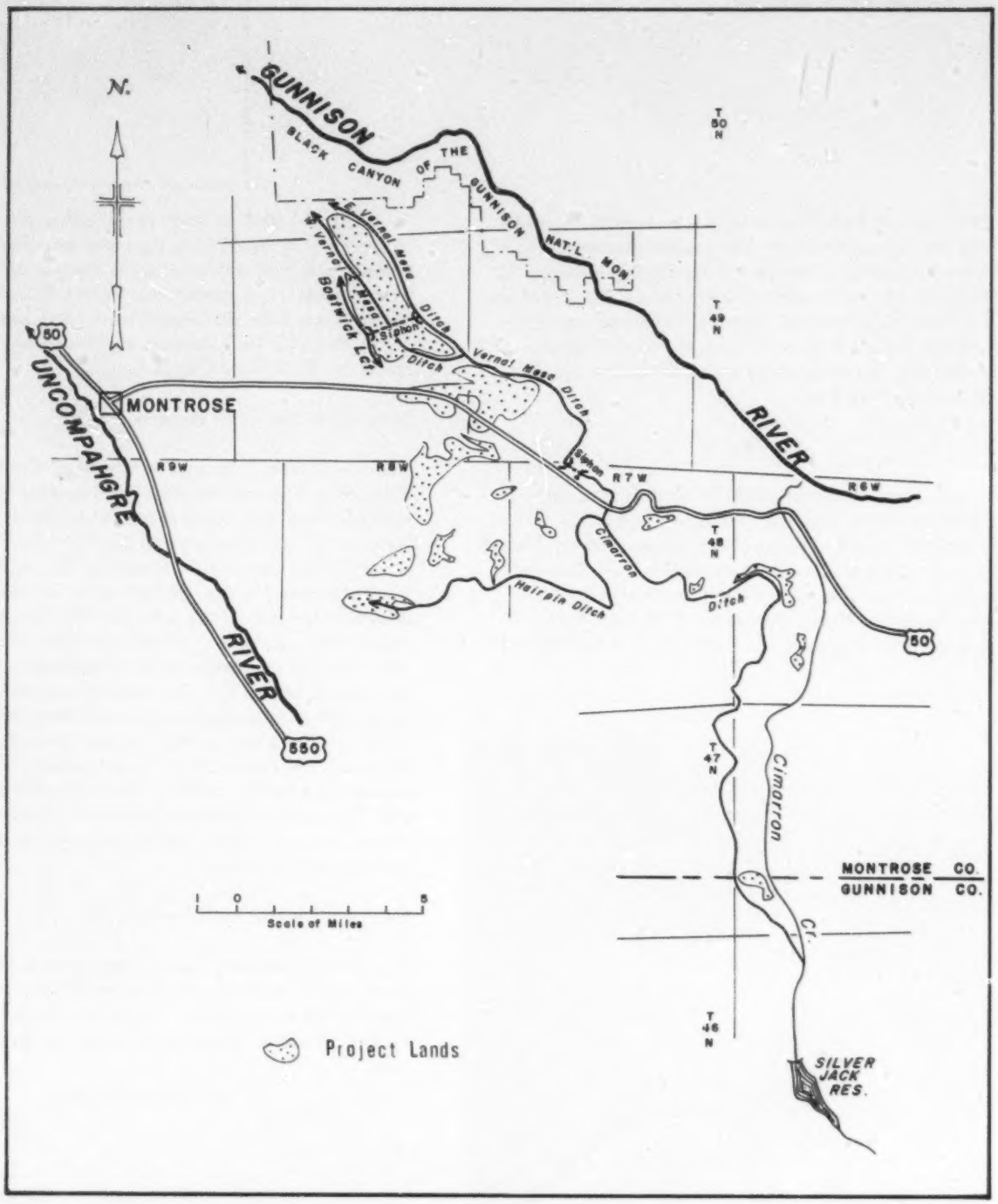
DEVELOPMENT

Early History

The Bostwick Park area was settled in the early 1880's, followed by a second influx at the time of irrigation development in 1910. By 1930, the population had

Region Revision 5/82
(From Project Data Book)

I27.2:



Bostwick Park Project

Morning-glory spillway intake structure

reached a peak of 75 to 80 families, but in 1960 decreased to about 40 families because of the trend toward larger farm units, use of modern labor-saving farm equipment, and drought conditions.

Investigations

The Bureau of Reclamation first reported on the Bostwick Park Project in a 1951 reconnaissance report on the Gunnison River Project. The plan presented in the 1961 feasibility study, upon which authorization was based, was essentially the same as the 1951 plan.

Authorization

The project was authorized as a participating project of the Colorado River Storage Project by Public Law 88-568, September 2, 1964 (78 Stat. 852).

Construction

Construction commenced at Silver Jack Dam late in 1966 and was completed in 1971. Silver Jack Reservoir was filled on June 10, 1971, and project water was made available to supplemental service lands from existing ditches on a water rental basis during the 1971, 1972, and 1973 irrigation seasons. A negative declaration of environmental impact was filed July 21, 1972, for drainage rehabilitation and for replacement of the Vernal Mesa conduit. Construction of these facilities was completed during fiscal year 1974.

Operating Agency

Project irrigation facilities were turned over to the Bostwick Park Water Conservancy District for operation and maintenance on January 1, 1976.

BENEFITS

Irrigation

The project furnishes a dependable late-season supply of irrigation water. Nonproject supplies are generally abundant until the latter part of the irrigation season, but then fall off resulting in serious curtailment of crop yields. Project water from Cimarron Creek and in small part from tributaries of Cedar Creek is used as a full irrigation supply for lands not previously irrigated and as a supplemental supply for lands inadequately served.

Beef cattle and sheep raising are the major enterprises in the project area. Irrigated lands are used chiefly for the production of alfalfa, grass hay pasture, and small grains for livestock feed.

Recreation

Plans are being completed for development of recreation facilities by the Forest Service under a cooperative arrangement with the Bureau of Reclamation. Development includes access roads, campgrounds, a boat dock, trails, fences, landscaping, and an administration site. There were 35,970 visitor days to the reservoir area in 1980.

Grain field in Bostwick Park Project

PROJECT DATA

Land Areas (1980)

Irrigable area	5,180 acres
Number of farms irrigated	38

Area Irrigated and Crop Value

Year	Area irrigated, acres	Crop value, dollars
1971	2,913	273,595
1972	3,925	472,540
1973	3,968	595,412
1974	4,086	504,042
1975	4,732	673,616
1976	4,395	580,308
1977	4,395	[1]257,283
1978	4,576	657,405
1979	4,684	803,130
1980	2,733	337,819

[1]Spring runoff was the lowest in 61 years of record throughout the Intermountain West and in most areas of Colorado precipitation for the year was considerably below average resulting in lower yields because of the drought.

Facilities in Operation

Storage dams	1	
Diversion dams	1	
Canals	23	mi
Laterals	49	mi
Drains	7.2	mi

Climatic Conditions

Annual precipitation	14	in
Temperature:		
Maximum	106	°F
Minimum	−27	°F
Mean	47	°F
Growing season	165	days
Elevation of irrigable area	6500-7700.0	ft

ENGINEERING DATA

Water Supply

CIMARRON CREEK

Drainage area above Cimarron Canal	66.8	mi²
Annual discharge:		
Maximum (1957)	115,700	acre-ft
Minimum (1954)	37,100	acre-ft
Average	68,800	acre-ft
Average annual water supply	11,100	acre-ft

Storage Facilities

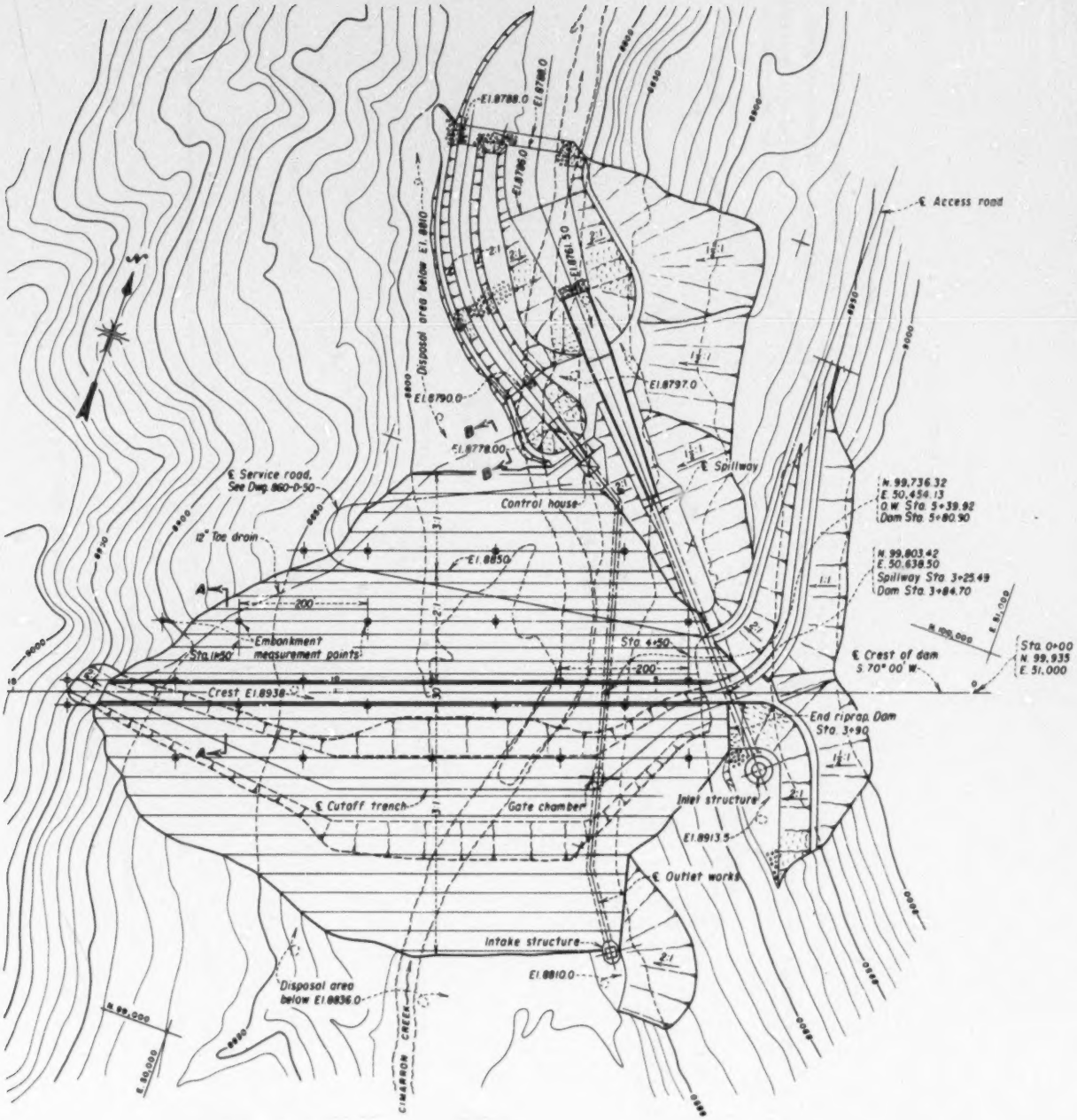
SILVER JACK DAM

Type: Zoned earthfill
Location: Cimarron Creek about 20 mi above junction with Gunnison River.
Construction period: 1966-71

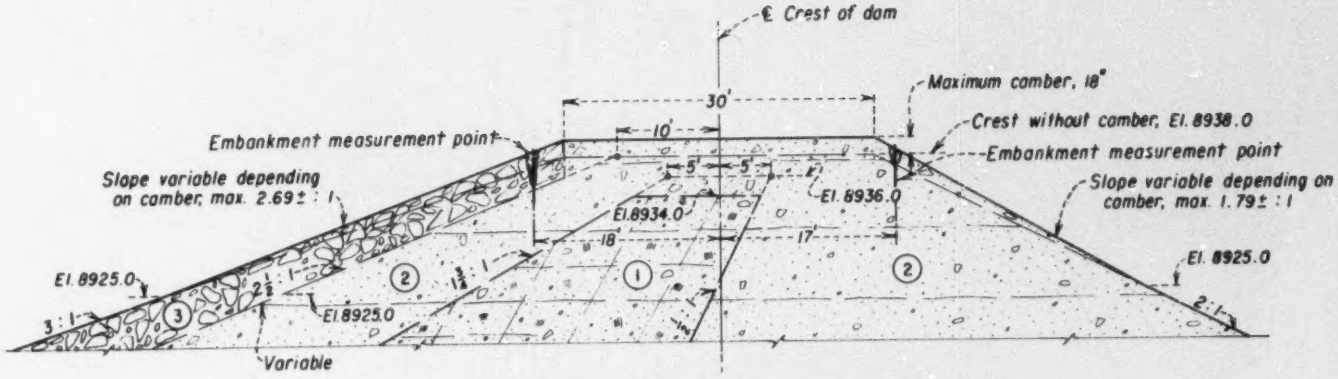
Reservoir, Silver Jack:		
Total capacity	13,520	acre-ft
Active capacity	12,820	acre-ft
Surface area	293	acres
Dimensions:		
Structural height	173	ft
Width	30	ft
Crest length	1,050	ft
Volume	1,278,140	yd³

Outlet works: To Cimarron Creek in right abutment, capacity 280 ft³/s at normal surface elevation of 8926 ft; capacity of 160 ft³/s at minimum surface elevation of 8840 ft. Spillway on right abutment is an uncontrolled ogee section with 6,220 ft³/s capacity at maximum surface elevation.

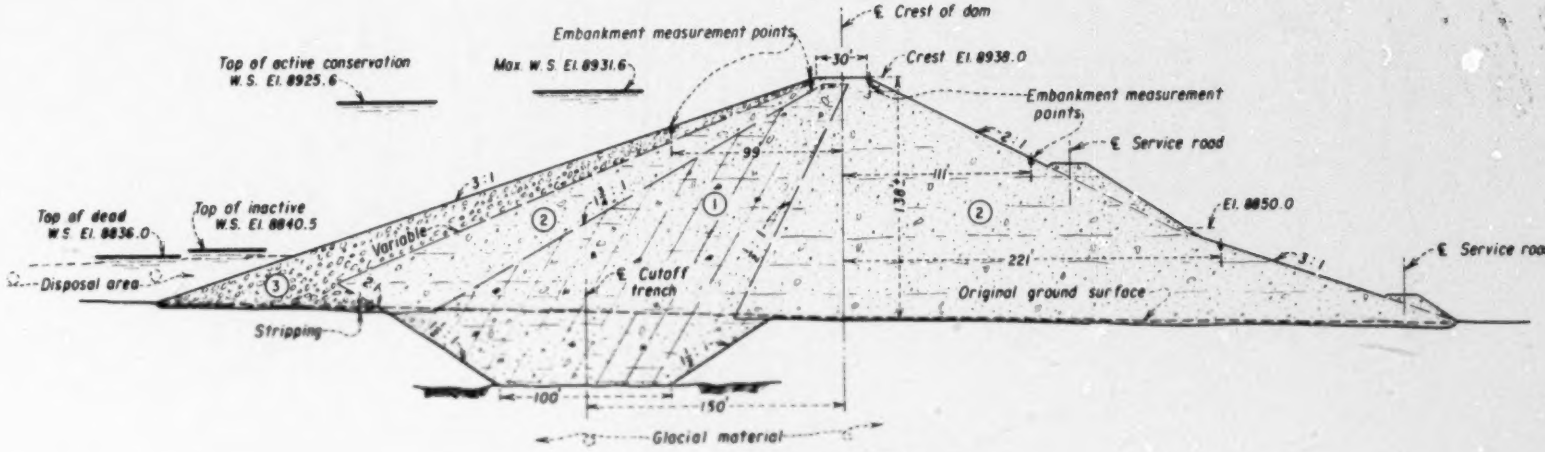
READEX FICHE
best copy available



Silver Jack Dam, Plan



CREST DETAIL AT MAXIMUM CAMBER



MAXIMUM SECTION

Silver Jack Dam, Sections

U.S. GOVERNMENT PRINTING OFFICE: 1962—578-615